

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A fuel cell system in a vehicle that is turned on and off by an ignition key, the fuel cell system being equipped with a fuel cell, said fuel cell system comprising:

a temperature detector ~~that detects~~ configured to detect a fuel cell ~~operating~~ temperature, wherein the fuel cell ~~operating~~ temperature is a temperature that reflects an internal temperature of said fuel cell;

a temperature-maintenance operation controller ~~that~~ configured to execute, if said detected fuel cell ~~operating~~ temperature equals or is less than a first reference temperature while the ignition key is in an off position and said fuel cell system is not operating, ~~executes a~~ temperature-maintenance operation ~~of on~~ said fuel cell using heat generated through electrochemical ~~reaction;~~ reaction by at least partially restarting the fuel cell;

an abnormality determination unit ~~that determines~~ configured to determine whether a detection abnormality regarding said fuel cell ~~operating~~ temperature has occurred in said temperature ~~detector;~~ detector, including determining that a detection abnormality has occurred when the temperature detector is operating abnormally but is not outputting an abnormal temperature reading; and

a warning issuance unit ~~that issues~~ configured to issue a warning when said abnormality determination unit determines that an abnormality has occurred in said temperature ~~detector.~~ detector,

the temperature detector operating to detect the fuel cell temperature when the ignition key is in the off position, and

the temperature-maintenance operation controller at least partially re-starts the fuel cell as needed to maintain the fuel cell temperature above the first reference temperature.

2. (Currently Amended) A fuel cell system according to claim 1, wherein said temperature-maintenance operation controller stops said temperature-maintenance operation when said fuel cell ~~operating~~-temperature detected by said temperature detector during said temperature-maintenance operation of the fuel cell equals or exceeds a second reference temperature which is higher than said first reference temperature.

3. (Previously Presented) A fuel cell system according to claim 2, wherein said fuel cell system includes a plurality of said temperature detectors, said abnormality determination unit determines whether an abnormality has occurred in each of said plurality of temperature detectors, and when said abnormality determination unit determines that an abnormality has occurred in any of said plurality of temperature detectors, said temperature-maintenance operation controller performs control pertaining to said temperature-maintenance operation based on the result of detection by the other temperature detectors as to which no abnormality was determined to exist.

4. (Currently Amended) A fuel cell system in a vehicle that has an ignition key that controls the vehicle to be on and off, the fuel cell system being equipped with a fuel cell, said fuel cell system comprising:

a plurality of temperature detectors ~~that detect~~ configured to detect a fuel cell ~~operating~~-temperature, wherein the fuel cell ~~operating~~-temperature is a temperature that reflects an internal temperature of said fuel cell;

an abnormality determination unit ~~that determines~~ configured to determine whether a detection abnormality has occurred regarding said fuel cell ~~operating~~-temperature in any of said plurality of temperature ~~detectors;~~ detectors, including determining that a detection

abnormality has occurred when at least one of the temperature detectors is operating abnormally but is not outputting an abnormal temperature reading; and

a temperature-maintenance operation controller ~~that, configured to execute,~~ when said abnormality determination unit determines that an abnormality has occurred in any of said temperature detectors while the ignition key is in an off position and said fuel cell system is not operating, ~~executes a~~ temperature-maintenance operation of said fuel cell using heat generated through electrochemical reaction by at least partially re-starting the fuel cell if said detected fuel cell ~~operating~~-temperature, as detected by remaining temperature detectors for which it has been determined that no abnormality has occurred by said abnormality determination unit, equals or is less than a first reference ~~temperature-temperature,~~

the temperature detectors operating to detect the fuel cell temperature when the ignition key is in the off position, and

the temperature-maintenance operation controller at least partially re-starts the fuel cell as needed to maintain the fuel cell temperature above the first reference temperature.

5. (Currently Amended) A fuel cell system according to claim 4, wherein said temperature-maintenance operation controller terminates said temperature-maintenance operation if any of said fuel cell ~~operating~~-temperature, which is detected by the remaining temperature detectors during said temperature-maintenance operation, equals or exceeds a second reference temperature that is higher than said first reference temperature.

6. (Original) A fuel cell system according to claim 1, wherein said abnormality determination unit determines that an abnormality exists when a signal indicating disconnection or short-circuit is output from said temperature detector.

7. (Original) A fuel cell system according to claim 2, wherein said abnormality determination unit determines that an abnormality exists when a signal indicating disconnection or short-circuit is output from said temperature detector.

8. (Original) A fuel cell system according to claim 3, wherein said abnormality determination unit determines that an abnormality exists when a signal indicating disconnection or short-circuit is output from said temperature detector.

9. (Original) A fuel cell system according to claim 4, wherein said abnormality determination unit determines that an abnormality exists when a signal indicating disconnection or short-circuit is output from said temperature detector.

10. (Original) A fuel cell system according to claim 5, wherein said abnormality determination unit determines that an abnormality exists when a signal indicating disconnection or short-circuit is output from said temperature detector.

11. (Currently Amended) An operation method for a fuel cell ~~system-system, in a vehicle that is turned on and off by an ignition switch, the system configured to detect, including when the ignition switch is in the an off position, that detects~~ a fuel cell ~~operating~~ temperature, which is a temperature that reflects an internal temperature of the fuel cell, and ~~executes to execute~~ temperature-maintenance operation of the fuel cell using heat generated through electrochemical reaction by at least partially re-starting the fuel cell if the detected fuel cell ~~operating~~ temperature equals or falls below a first reference temperature while the ignition key is in an the off position, said method comprising:

determining whether an abnormality has occurred in a temperature detector that detects said fuel cell ~~operating~~ temperature when said fuel cell ~~operating~~ temperature is detected, including determining that a detection abnormality has occurred when the temperature detector is operating abnormally but is not outputting an abnormal temperature reading; and

issuing a warning when an abnormality is detected in said temperature detector.

12. (Currently Amended) A fuel cell system operation method according to claim

11 further comprising:

detecting the fuel cell ~~operating~~-temperature while said fuel cell is in a temperature-maintenance operation; and

stopping said temperature-maintenance operation when said detected fuel cell temperature equals or exceeds a second reference temperature that is higher than said first reference temperature.

13. (Previously Presented) A fuel cell system according to claim 1, further comprising a secondary battery,

wherein electronic power generated during the temperature-maintenance operation is charged to the secondary battery.

14. (Previously Presented) A fuel cell system according to claim 4, further comprising a secondary battery,

wherein electronic power generated during the temperature-maintenance operation is charged to the secondary battery.

15. (Previously Presented) A fuel cell system operation method according to claim 11, wherein electronic power generated during the temperature-maintenance operation is charged to a secondary battery.

16. (New) A fuel cell system according to claim 2, wherein the second reference temperature is less than a normal operating temperature of the fuel cell.

17. (New) A fuel cell system according to claim 16, wherein the temperature-maintenance operation prevents the fuel cell from freezing, but does not warm the fuel cell up to the normal operating temperature of the fuel cell.

18. (New) A fuel cell system operation method according to claim 12, wherein the second reference temperature is less than a normal operating temperature of the fuel cell.

19. (New) A fuel cell system operation method according to claim 18, wherein the temperature-maintenance operation method prevents the fuel cell from freezing, but does not warm the fuel cell up to the normal operating temperature of the fuel cell.